

Notice of Allowability

Application No.

10/531,171

Examiner

Jason M. Nolan, Ph.D.

Applicant(s)

KAWAZOE, KENTARO

Art Unit

1626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/21/2007.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 5/5/2005 | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

DETAILED ACTION

Claims 1-8 are currently pending in the instant application. No amendments or new Claims have been presented.

Response to Petition/Arguments

The objection to **Claims 1-5, 7 & 8** in the Office Action, 12/21/2006, has been reconsidered and is withdrawn. Therefore, the Restriction Requirement (lack of unity) 08/21/2006, has been reconsidered and withdrawn; **Claims 1-8** have been examined.

Information Disclosure Statement

Applicants' information disclosure statement (IDS), filed on 05/05/2005 has been considered. Please refer to Applicants' copy of the 1449 submitted herein.

Statement of Reasons for Allowance

The present invention pertains to the conversion of an aromatic-X compound, (wherein X is either a hydroxymethyl, alkoxymethyl, or formyl group) to an aromatic-nitrile using a hypobromite reagent (MBRO_m) in the presence of an acid catalyst and either ammonia or an ammonium salt as the nitrogen source. Said transformation, depicted in Claim 1 as the conversion of formula (1) to formula (3) is free of the prior art; nothing known in the art anticipates or renders the methodology of the instant application obvious.

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One skilled in the art would be enabled to use the synthetic protocol taught herein for the purpose of functional group manipulation, (conversion of an aromatic-hydroxymethyl group (and the like) to an aromatic-nitrile), using the teachings of the Specification.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1) Ikemoto *et al.* (US Patent 6,433,195; 08/13/**2002**) describes the conversion of aromatic-aldehydes to aromatic-nitriles using hydroxylamine followed by dehydration.

2) Kataoka *et al.* (US Patent 7,102,025; 09/05/**2006**) describes a method of producing alkyl- or cycloalkyl-nitriles using ammonia and oxygen in the presence of a metal catalyst.

3) Herman *et al.* (US Patent 4,929,634; 05/29/**1990**) describes of converting 2-pyrrole-carbaldehyde to 2-pyrrole-carbonitrile (see Example 31, Column 37) using hydroxylamine-O-sulfonic acid.

4) Kudschus *et al.* (US Patent 5,618,965; 04/08/**1997**) describes a process for preparing aromatic nitriles from aromatic aldehydes using hydroxylammonium salts followed by dehydration.

Claims 1-8 are allowed.


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Telephone Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jason M. Nolan, Ph.D.** whose telephone number is **(571) 272-4356** and electronic mail is **Jason.Nolan@uspto.gov**. The examiner can normally be reached on Mon - Fri (9:00 - 5:30PM). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Joseph M^cKane** can be reached on **(571) 272-0699**. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Art Unit 1626



REBECCA ANDERSON
PATENT EXAMINER

for Joseph K. M^cKane
Supervisory Patent Examiner
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Date: June 16, 2007